

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-30. (Canceled.)

31. (New) A method for identifying a corresponding session for a packet, comprising:

5 (a) in a first session, a first endpoint transmitting first and second sets of packets, respectively, to a session monitor and a second endpoint, wherein the first and second sets of packets have differing memberships, wherein each packet in the first set of packets is used for determining network performance information, and wherein each of the first and second endpoints have an associated electronic address on a network and a session identifier;

10 (b) the session monitor receiving at least a first packet in the first packet set, the first packet comprising at least the network address and session identifier associated with the first endpoint;

15 (c) determining whether at least one of the first endpoint's network address and session identifier correspond to an active session entry recorded in a first set of data structures, the first set of data structures comprising active session entries, each entry in the first set of data structures having at least network addresses for each of the endpoints to the corresponding session;

20 (d) when at least one of the first endpoint's network address and session identifier correspond to an active session entry in the first set of data structures, updating the corresponding entry to include the network performance information associated with the at least a first packet;

(e) determining whether at least one of the first endpoint's network address and session identifier correspond to an active session entry recorded in a second set of data structures, the second set of data structures having active session entries, each of the entries in the second set of data structures failing to comprise network addresses for each

25 of the endpoints to the corresponding session; and

(f) when at least one of the first endpoint's network address and session identifier correspond to an active session entry in the second set of data structures, updating the entry to include the performance information associated with the at least a first packet.

32. (New) The method of claim 31, wherein the first set of packets includes fewer members than the second set of packets, wherein at least some of the packets in the second set of packets comprise media information associated with the first session, and wherein, in steps (c) and (e), a corresponding entry is identified using the network address
5 and session identifier of the first endpoint.

33. (New) The method of claim 31, wherein step (e) is performed when the at least one of the first endpoint's network address and session identifier fail to correspond to an entry in the first set of data structures, wherein the electronic network address is at least one of a port and transport address, and further comprising before the determining
10 step (c):

(b1) parsing the at least a first packet for at least one selected field; and

(b2) determining whether the network address of the second endpoint is in the selected field, wherein, when the network address of the second endpoint is in the selected field, steps (e)-(f) are not performed and, when the network address of the second
15 endpoint is not in the selected field, steps (e)-(f) are performed.

34. (New) The method of claim 31, wherein the network performance information comprises statistics about the media packets in the second set of packets and further comprising:

(g) determining whether a pair of session entries in the second set of data
5 structures pertain to a common session; and

(h) when the second set of data structures includes a pair of session entries pertaining to a common session, removing the pair of entries from the second set of data structures and adding the pair of session entries to a common session entry in the first set

of data structures.

35. (New) The method of claim 31, wherein, when the at least one of the first endpoint's network address and session identifier are not in the first and second sets of data structures, the at least one of the first endpoint's network address and session identifier is added to the second set of data structures.

36. (New) The method of claim 31, wherein the packets in the first set of packets are defined by the Real Time Transfer Control Protocol, wherein the packets in the second set of packets are defined by one of the Real Time Transfer Control Protocol and the Real Time Protocol, wherein the performance information comprise statistics respecting at least one of jitter, packet loss, and round-trip time, wherein step (b) comprises the substeps:

(b1) parsing the at least a first packet to locate selected fields comprising the transport address of the sending endpoint, the session identifier of the sending endpoint, the transport address of the destination endpoint, and the session identifier of the destination endpoint, wherein the first endpoint is the source endpoint and the second endpoint is the destination;

(b2) when the at least a first packet comprises the network address of the second endpoint, updating a set of data structures to include the second endpoint's network address; and

(b3) when the at least a first packet does not comprise the network address of the second endpoint, updating a corresponding entry in one of the first and second sets of data structures.

37. (New) The method of claim 32, wherein the first set of data structures comprises, for each active session, a transport address of each of the endpoints participating in the session, the session identifiers for each of the endpoints participating in the session, and performance information corresponding to packets exchanged in the session, wherein the second set of data structures comprises, for each active session, a

transport address of at least one of the endpoints participating in the session, a session identifier for at least one but less than all of the endpoints participating in the session, and performance information corresponding to packets exchanged in the session, and wherein the performance information comprises at least one of jitter, packet loss, and packet round-trip time, wherein the media information comprises voice data, and wherein the packets in the first set of packets do not contain media information.

38. (New) The method of claim 31, wherein steps (d) and (e) are not performed when the at least a first packet includes the network address of the second endpoint and wherein the session monitor performs steps (c) and (e).

39. (New) A computer readable medium comprising processor executable instructions to perform the steps of claim 31.

40. (New) In a network, the network comprising:

(i) a session monitor operable to track network performance for a plurality of sessions; and

5 (ii) first endpoint and second endpoints, the first endpoint being operable to transmit first and second sets of packets, respectively, to the session monitor and the second endpoint, wherein the first and second sets of packets have differing memberships, wherein each packet in the first set of packets is used by the session monitor to determine network performance information, and wherein each of the first and second endpoints have an associated electronic address on a network and a session
10 identifier, the session monitor comprising:

(a) an input operable to receive at least a first packet in the first packet set, the first packet comprising at least the network address and session identifier associated with the first endpoint; and

(b) a matcher operable to:

15 (b1) determine whether at least one of the first endpoint's network address and session identifier correspond to an active session entry recorded in a first set of data

structures, the first set of data structures comprising active session entries, each entry in the first set of data structures having at least network addresses for each of the endpoints to the corresponding session;

20 (b2) when at least one of the first endpoint's network address and session identifier correspond to an active session entry in the first set of data structures, update the corresponding entry to include the performance information associated with the at least a first packet;

25 (b3) determine whether at least one of the first endpoint's network address and session identifier correspond to an active session entry recorded in a second set of data structures, the second set of data structures having active session entries, each of the entries in the second set of data structures failing to comprise network addresses for each of the endpoints to the corresponding session; and

30 (b4) when at least one of the first endpoint's network address and session identifier correspond to an active session entry in the second set of data structures, update the entry to include the performance information associated with the at least a first packet.

41. (New) The session monitor of claim 40, wherein the first set of packets includes fewer members than the second set of packets, wherein at least some of the
35 packets in the second set of packets comprise media information associated with the first session, and wherein, in operations (b1) and (b3), a corresponding entry is identified using the network address and session identifier of the first endpoint.

42. (New) The session monitor of claim 40, wherein operation (b3) is
40 performed when the at least one of the first endpoint's network address and session identifier fail to correspond to an entry in the first set of data structures, wherein the electronic network address is at least one of a port and transport address, and further comprising:

45 (c) a parser operable to parse the at least a first packet for at least one selected field and determine whether the network address of the second endpoint is in the selected field, wherein, when the network address of the second endpoint is in the selected field,

operations (b1)-(b4) are not performed and, when the network address of the second endpoint is not in the selected field, operations (b1)-(b4) are performed.

43. (New) The session monitor of claim 40, wherein the network performance information comprises statistics about the media packets in the second set of packets and wherein the session monitor is further operable to:

5 (b5) determine whether a pair of session entries in the second set of data structures pertain to a common session; and

(b6) when the second set of data structures includes a pair of session entries pertaining to a common session, remove the pair of entries from the second set of data structures and adding the pair of session entries to a common session entry in the first set of data structures.

44. (New) The session monitor of claim 40, wherein, when the at least one of the first endpoint's network address and session identifier are not in the first and second sets of data structures, the at least one of the first endpoint's network address and session identifier is added to the second set of data structures.

45. (New) The session monitor of claim 40, wherein the packets in the first set of packets are defined by the Real Time Transfer Control Protocol, wherein the packets in the second set of packets are defined by one of the Real Time Transfer Control Protocol and the Real Time Protocol, wherein the performance information comprise statistics respecting at least one of jitter, packet loss, and round-trip time, and further comprising:

(c) a parser operable to parse the at least a first packet to locate selected fields comprising the transport address of the sending endpoint, the session identifier of the sending endpoint, the transport address of the destination endpoint, and the session identifier of the destination endpoint, wherein the first endpoint is the source endpoint and the second endpoint is the destination and wherein the session monitor is further operable to:

(b5) when the at least a first packet comprises the network address of the second

endpoint, update a set of data structures to include the second endpoint's network address; and

(b6) when the at least a first packet does not comprise the network address of the second endpoint, update a corresponding entry in one of the first and second sets of data structures.

46. (New) The session monitor of claim 41, wherein the first set of data structures comprises, for each active session, a transport address of each of the endpoints participating in the session, the session identifiers for each of the endpoints participating in the session, and performance information corresponding to packets exchanged in the session, wherein the second set of data structures comprises, for each active session, a transport address of at least one of the endpoints participating in the session, a session identifier for at least one but less than all of the endpoints participating in the session, and performance information corresponding to packets exchanged in the session, and wherein the performance information comprises at least one of jitter, packet loss, and packet round-trip time, wherein the media information comprises voice data, and wherein the packets in the first set of packets do not contain media information.

47. (New) The session monitor of claim 40, wherein operations (b3) and (b4) are not performed when the at least a first packet includes the network address of the second endpoint.

48. (New) In a network, the network comprising:

(i) a session monitor operable to track network performance for a plurality of sessions; and

(ii) first endpoint and second endpoints, the first endpoint being operable to transmit first and second sets of packets, respectively, to the session monitor and the second endpoint, wherein the first and second sets of packets have differing memberships, wherein each packet in the first set of packets is used by the session monitor to determine network performance information, and wherein each of the first and second endpoints have an associated electronic address on a network and a session

10 identifier, a method comprising:

(a) the first endpoint receiving at least a first packet communicated between the first endpoint and a second endpoint to a first session, the first packet comprising an address of the first endpoint on the network, an address of the second endpoint on the network, and voice information, and being a member of the second packet set; and

15 (b) the first endpoint transmitting at least a second packet to a session monitor, the at least a second packet including the respective first and second network addresses of the first and second endpoints and being a member of the first packet set.

49. (New) The method of claim 48, wherein step (a) comprises the substep:

(a1) determining a value of a flag in the at least a first packet;

and wherein, when the flag has a first predetermined value, performing step (b) and, when the flag has a second predetermined value, not performing step (b).

50. (New) The method of claim 48, further comprising:

(c) the session monitor receiving at least a second packet in the first packet set, the second packet comprising at least the network address and session identifier associated with the first endpoint;

5 (d) determining whether at least one of the first endpoint's network address and session identifier correspond to an active session entry recorded in a first set of data structures, the first set of data structures comprising active session entries, each entry in the first set of data structures having at least network addresses for each of the endpoints to the corresponding session;

10 (e) when at least one of the first endpoint's network address and session identifier correspond to an active session entry in the first set of data structures, updating the corresponding entry to include the network performance information associated with the at least a second packet;

15 (f) determining whether at least one of the first endpoint's network address and session identifier correspond to an active session entry recorded in a second set of data structures, the second set of data structures having active session entries, each of the entries in the second set of data structures failing to comprise network addresses for each

of the endpoints to the corresponding session; and

20 (g) when at least one of the first endpoint's network address and session identifier correspond to an active session entry in the second set of data structures, updating the entry to include the performance information associated with the at least a second packet.

51. (New) In a network, the network comprising:

25 (i) a session monitor operable to track network performance for a plurality of sessions; and

(ii) first endpoint and second endpoints, the first endpoint being operable to transmit first and second sets of packets, respectively, to the session monitor and the second endpoint, wherein the first and second sets of packets have differing memberships, wherein each packet in the first set of packets is used by the session
30 monitor to determine network performance information, and wherein each of the first and second endpoints have an associated electronic address on a network and a session identifier, the first endpoint comprising:

(a) an input operable to receive at least a first packet communicated between the first and second endpoints to a first session, the first packet comprising a network address
35 of the first endpoint, a network address of the second endpoint, and voice information, and being a member of the second packet set; and

(b) a transmitter operable to transmit at least a second packet to a session monitor, the at least a second packet including the respective first and second network addresses of the first and second endpoints and being a member of the first packet set.

52. (New) The network of claim 51, wherein the first packet includes a flag and wherein, when the flag has a first predetermined value, the transmitter transmits the at least a second packet and, when the flag has a second predetermined value, the transmitter does not transmit the at least a second packet.

53. (New) The network of claim 51, wherein the session monitor comprises:
comprising:

(a) an input operable to receive at least a second packet in the first packet set, the

5 second packet comprising at least the network address and session identifier associated with the first endpoint; and

(b) a matcher operable to:

(b1) determine whether at least one of the first endpoint's network address and session identifier correspond to an active session entry recorded in a first set of data structures, the first set of data structures comprising active session entries, each entry in the first set of data structures having at least network addresses for each of the endpoints to the corresponding session;

(b2) when at least one of the first endpoint's network address and session identifier correspond to an active session entry in the first set of data structures, update the corresponding entry to include the performance information associated with the at least a second packet;

(b3) determine whether at least one of the first endpoint's network address and session identifier correspond to an active session entry recorded in a second set of data structures, the second set of data structures having active session entries, each of the entries in the second set of data structures failing to comprise network addresses for each of the endpoints to the corresponding session; and

(b4) when at least one of the first endpoint's network address and session identifier correspond to an active session entry in the second set of data structures, update the entry to include the performance information associated with the at least a second packet.

54. (New) A session packet for transmission on a network, comprising:
a source network address of a first participant to a Voice over Internet Protocol (VoIP) session;

a destination network address associated with a session monitor;
5 a network address of a second participant to the VoIP session; and
session information associated with the VoIP session.

55. (New) The session packet of claim 54, further comprising:

a first session identifier associated with the first participant; and
a second session identifier associated with the second participant.

56. (New) The session packet of claim 54, wherein the contents of the session packet are defined by the Real Time Control Protocol.